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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the Application of:  
JOHN GRAEME PEPIN

CASE NO.: EL0475 US CIP

APPLICATION NO.: 10/630,296

CONFIRMATION NO.: 9720

GROUP ART UNIT: 1775

EXAMINER: JASON SAVAGE

FILED: JULY 30, 2003

FOR: THICK FILM COMPOSITION YIELDING MAGNETIC PROPERTIES

**RESPONSE AND AMENDMENT**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

This is in response to the office action mailed on March 25, 2005. A request for three months extension to answer accompanies this response.

AMENDMENT

In the below claims, crossed out terms mean deletions and underlined terms mean additions.

1. (Original) A magnetic thick film composition comprising particles of permanent magnetic materials comprising Nd-Fe-B system materials, dispersed in organic medium wherein the medium comprises a polymer selected from polyurethane, phenoxy and mixtures thereof, and organic solvent.
2. (Original) The composition of Claim 1 wherein said particles of permanent magnetic materials further comprise other rare earth metals that contribute to the magnetic properties selected from Pr, Sm, Eu, Gd, and mixtures thereof.
3. (Currently amended) The composition as in any one of Claims 1 ~~or~~ 2 wherein said particles of permanent magnetic materials further comprise other transition metals selected from Cr, Ni, Co, Mn, and mixtures thereof.
4. (Original) The composition of any one of Claims 1-3 wherein the magnetic particles are found in the composition in the range of 50-91% by weight based on total composition.
5. (Original) The composition of any one of Claims 1-3 wherein the organic medium is found in the composition in the range of 9-50% by weight based on total composition.
6. (Original) The composition of any one of Claims 1-3 which is of paste consistency suitable for screen-printing.
7. (Original) The composition of any one of Claims 1-3 disposed on a substrate wherein the composition is processed to at least substantially remove the organic solvent.
8. (Original) The composition of Claim 6 wherein the composition is applied to a substrate by a disposing means.
9. (Original) The composition of Claim 8 wherein the disposing means is selected from screen-printing, spraying, doctor blading, brushing and dipping.

Please add new Claims 10-13 as follows:

10. (New) A magnetic thick film composition comprising particles of permanent magnetic materials comprising Nd-Fe-B system materials, dispersed in organic medium wherein the medium comprises a polymer selected from polyurethane, phenoxy and mixtures thereof, and organic solvent, wherein said particles of permanent magnetic materials further comprise other rare earth metals that contribute to the magnetic properties selected from Pr, Sm, Eu, Gd, and mixtures thereof and other transition metals selected from the group consisting of Cr, Ni, Co, Mn, and mixtures thereof.
11. (New) An isotropic magnetic thick film composition comprising particles of

permanent magnetic materials comprising Nd-Fe-B powder, dispersed in organic medium, and organic solvent and wherein said powder is selected from the group consisting of atomized powders and dry-milled powders and wherein the medium comprises a polymer selected from polyurethane, phenoxy and mixtures thereof.

12. (New) The composition of Claim 1 wherein said particles of permanent magnetic materials further comprise rare earth and transition metals selected from Pr, Sm, Eu, Gd, and mixtures thereof and from Cr, Ni, Co, Mn, and mixtures thereof.
13. (New) The composition of Claim 1, which is of paste consistency suitable for screen-printing.